## a.) Amendment to the Claims

1. (Currently Amended) A method for inhibiting a phosphodiesterase 10A (PDE10A) comprising the step of administering an effective amount of quinoline derivative represented by general formula (I)

$$\left(R^4\right)_{n} \stackrel{6}{\underset{7}{\bigvee}} \stackrel{1}{\underset{8}{\bigvee}} \stackrel{R^1}{\underset{N}{\bigvee}} R^2$$

[wherein n represents an integer of from 1 to 4, R<sup>1</sup> represents substituted or unsubstituted lower alkyl, -C(=Y)R<sup>9</sup> (wherein Y represents an oxygen atom or a sulfur atom, and R<sup>9</sup> represents a hydrogen atom, hydroxy, substituted or unsubstituted lower alkyl, substituted or unsubstituted lower alkoxy, substituted or unsubstituted aryl, a substituted or unsubstituted heterocyclic group, amino, mono-lower alkylamino or di-lower alkylamino), hydroxy, halogen, cyano, amino, mono-lower alkylamino or di-lower alkyl amino, R<sup>2</sup> represents a hydrogen atom, amino, nitro, substituted or unsubstituted lower alkyl, substituted or unsubstituted lower alkoxy, -S(O)<sub>m</sub>R<sup>12</sup> (wherein R<sup>12</sup> represents substituted or unsubstituted lower alkyl or substituted or unsubstituted aryl, and m represents an integer of from 0 to 2), mono-lower alkylamino or di-lower alkylamino, R<sup>3</sup> represents a hydrogen atom, halogen, hydroxy, substituted or unsubstituted lower alkyl, substituted or unsubstituted aryl or a substituted or unsubstituted heterocyclic group, or R<sup>2</sup> and R<sup>3</sup> form a substituted or unsubstituted condensed ring together with two carbon atoms on roots thereof, and R<sup>4</sup> represents a

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hydrogen atom, halogen, cyano, amino, nitro, substituted or unsubstituted lower alkyl, substituted or unsubstituted cycloalkyl, substituted or unsubstituted lower alkoxy, -  $S(O)_{ma}R^{12a}$  (wherein  $R^{12a}$  and ma have the same meanings as those of the above  $R^{12}$  and m respectively), - $C(=Y^1)R^{9a}$  (wherein  $Y^1$  and  $R^{9a}$  have the same meanings as those of the above Y and  $R^9$  respectively), mono-lower alkylamino or di-lower alkylamino, and when n is an integer of 2 or more,  $R^4$ s each may be the same or different],

or a pharmaceutically acceptable salt thereof.

- 2. (Previously Presented) The method according to claim 1, wherein  $R^1$  is substituted or unsubstituted lower alkyl,  $-C(=Y)R^9$ , cyano or amino, and  $R^2$  is substituted or unsubstituted lower alkyl.
- 3. (Previously Presented) The method according to claim 1, wherein  $R^1$  is methyl, hydroxymethyl, acetyl, carboxy, methoxycarbonyl, cyano or amino.
- 4. (Previously Presented) The method according to any one of claims 1 to 3, wherein R<sup>3</sup> is substituted or unsubstituted aryl or a substituted or unsubstituted heterocyclic group.

- 5. (Previously Presented) The method according to any one of claims 1 to 3, wherein R<sup>3</sup> is substituted or unsubstituted biphenylyl or substituted or unsubstituted piperazinyl.
- 6. (Previously Presented) The method according to any one of claims 1 to 3, wherein R<sup>3</sup> is substituted or unsubstituted biphenyl-4-yl or substituted or unsubstituted piperazin-1-yl.
- 7. (Previously Presented) The method according to any one of claims

  1 to 3, wherein R<sup>3</sup> is general formula (A)

[wherein R<sup>5</sup>, R<sup>6</sup> and R<sup>7</sup> independently represent a hydrogen atom, halogen, substituted or unsubstituted lower alkyl, substituted or unsubstituted lower alkoxy, aryl, substituted or unsubstituted lower alkanoyl or a substituted or unsubstituted heterocyclic group]

or piperazin-1-yl having substituted or unsubstituted lower alkyl or substituted or unsubstituted aryl as a substituent on the 4-position.

- 8. (Previously Presented) The method according to any one of claims 1 to 3, wherein n is 1, and R<sup>4</sup> is halogen.
- 9. (Currently Amended) A quinoline derivative represented by general formula (IA)

$$\left(R^{4}\right)_{n} \stackrel{6}{\underset{7}{\bigvee}} \stackrel{1}{\underset{8}{\bigvee}} R^{1A}$$

$$\left(IA\right)$$

[wherein R  $^{1A}$  represents lower alkyl, hydroxy lower alkyl,  $-C(=Y)R^{9A}$  (wherein Y represents an oxygen atom or a sulfur atom, and R  $^{9A}$  represents a hydrogen atom, lower alkyl, lower alkoxy, amino, mono-lower alkylamino or di-lower alkylamino, cyano, amino, mono-lower alkylamino or di-lower alkylamino, R  $^{2A}$  represents amino, nitro, unsubstituted lower alkyl, substituted or unsubstituted lower alkoxy,  $-S(O)_mR^{12}$  (wherein R  $^{12}$  represents substituted or unsubstituted lower alkyl, or substituted or unsubstituted aryl, and m represents an integer of from 0 to 2), mono-lower alkylamino or di-lower alkylamino, and R  $^{3A}$  represents a substituted or unsubstituted heterocyclic group or substituted or unsubstituted aryl, or R  $^{2A}$  and R  $^{3A}$  form cycloalkane condensed with a substituted or unsubstituted benzene ring together with two carbon atoms on roots thereof, and R  $^4$  represents a hydrogen atom, halogen, cyano, amino, nitro, unsubstituted lower alkyl, substituted or unsubstituted lower alkyl, substituted or unsubstituted lower alkoxy,  $-S(O)_{ma}R^{12a}$  (wherein R  $^{12a}$  and ma have the

same meanings as  $R^{12}$  and m, respectively),  $-C(=Y^1)R^{9a}$  (wherein  $Y^1$  and  $R^{9a}$  have the same meanings as Y and  $R^9$ , respectively), mono-lower alkylamino or di-lower alkylamino, and when n is an integer of 2 or more,  $R^4$ s each may be the same or different, provided that when  $R^{1A}$  is hydroxymethyl or  $-C(=O)R^{9B}$  (wherein  $R^{9B}$  represents a hydrogen atom, ethyloxy, n-propylamino or diethylamino),  $R^{3A}$  is not 4-cyclohexylphenyl, when  $R^{1A}$  is hydroxymethyl or  $-C(=O)R^{9C}$  (wherein  $R^{9C}$  represents methoxy, amino, monolower alkylamino or di-lower alkylamino) and  $R^{2A}$  is carboxyethyl or methoxycarbonylethyl,  $R^{3A}$  is not 4-(2-fluorophehyl)phenyl nor biphenyl-4-yl, and when  $R^{1A}$  is hydroxymethyl or  $-C(=O)R^{9D}$  (wherein  $R^{9D}$  represents amino or lower alkoxy) and  $R^{2A}$  is methyl,  $R^{3A}$  is not biphenyl-4-yl],

or a pharmaceutically acceptable salt thereof.

- 10. (Original) The quinoline derivative or the pharmaceutically acceptable salt thereof according to claim 9, wherein  $R^{3A}$  is substituted or unsubstituted biphenylyl or substituted or unsubstituted piperazin-1-yl.
- 11. (Original) The quinoline derivative or the pharmaceutically acceptable salt thereof according to claim 9, wherein R<sup>3A</sup> is substituted or unsubstituted biphenylyl or piperazin-1-yl having substituted or unsubstituted lower alkyl or substituted or unsubstituted aryl as a substituent on the 4-position.

- 12. (Original) The quinoline derivative or the pharmaceutically acceptable salt thereof according to claim 9, wherein R<sup>3A</sup> is piperazin-1-yl having substituted or unsubstituted aryl as a substituent on the 4-position.
- 13. (Previously Presented) The quinoline derivative or the pharmaceutically acceptable salt thereof according to any one of claims 9 to 12, wherein  $R^{1A}$  is lower alkyl, hydroxy lower alkyl,  $-C(=O)R^{9E}$  (wherein  $R^{9E}$  represents lower alkyl or lower alkoxy) or cyano, and  $R^{2A}$  is unsubstituted lower alkyl.
- 14. (Previously Presented) The quinoline derivative or the pharmaceutically acceptable salt thereof according to any one of claims 9 to 12, wherein  $R^{1A}$  is methyl, hydroxymethyl, acetyl, methoxycarbonyl or cyano.
- $15. \qquad (Previously\ Presented)\ The\ quinoline\ derivative\ or\ the$   $pharmaceutically\ acceptable\ salt\ thereof\ according\ to\ claim\ 14,\ wherein\ n\ is\ 1,\ and\ R^4\ is$  halogen.
- 16. (Previously Presented) A method for inhibiting PDE10A comprising the step of administering an effective amount of the quinoline derivative or the pharmaceutically acceptable salt thereof according to claim 14.

## Claims 17-33 (Cancelled).

- 34. (Previously Presented) The method according to any one of claim 4, wherein n is 1, and  $R^4$  is halogen.
- 35. (Previously Presented) The method according to any one of claim 5, wherein n is 1, and  $R^4$  is halogen.
- 36. (Previously Presented) The method according to any one of claim 6, wherein n is 1, and  $R^4$  is halogen.
- $\label{eq:conding} 37. \qquad \text{(Previously Presented)} \ \ \, \text{The method according to any one of claim 7,} \\ \text{wherein n is 1, and $R^4$ is halogen.}$
- 38. (Previously Presented) The method according to claim 28, wherein  $R^1$  is substituted or unsubstituted lower alkyl,  $-C(=Y)R^9$ , cyano or amino, and  $R^2$  is substituted or unsubstituted lower alkyl.

Claims 39-48 (Cancelled).